> mobile node, generating a link-layer frame includes a broadcast address and the unicast destination address, and sending via the broadcast address the link-layer frame to a plurality of access devices wherein at least one access device supports the mobile node (col. 3/ln. 61-col. 35/ln. 32).

(Page 2, Office Action). The Examiner cites column 3, line 61 through column 35, line 32 which represents the entirety of Choyi.

In the overview section in Choyi entitled "Present Invention Contrasted with Prior Art Solutions," Choyi is summarized as follows:

> Micro-mobility is an extension to Mobile IP, and is achieved by hiding the exact location of the mobile node from the home agent so that registration messages do not have to be sent all the way to the HA, instead, the messages are processed locally. The mobile node's exact location is kept local within the wireless domain it has visited. This paper presents a novel protocol designed to address micro-mobility. The protocol is based on IP multicast and has been further refined using Explicit Multicast to address the issues of fast and smooth handoffs. Explicit Multicast has been used to overcome some of the drawbacks of regular IP multicast.

(Col. 2, lines 46-57; Underlining added). Thus, Choyi merely teaches various multicast approaches as they relate to foreign mobility and handoffs between cells. In particular, Choyi discusses HAWAII, Cellular IP, the Singapore University Proposal, Hierarchical Micro Mobility, Multicasting Based Architecture for Internet Host Mobility, and the Multicast Micro-Mobility (MMM) Protocol, each of which are discussed below.

Regarding HAWAII, Choyi teaches:

> A unique co-located care-of-address is assigned to the mobile Host to provide for straight-forward QoS support Special Paths are established to maintain end-to-end connectivity as the mobile host moves. These paths are used to provide for hop-by-hop routing of packets.

(Col. 4, lines 13-15). A hop-by-hop method does not relate to "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address"

and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). Claim 15 recites similar features.

Regarding Cellular IP, Choyi teaches:

> Cellular IP is similar to HAWAII as it relies on a hop-by-hop principle to handle the traffic within the wireless domain. ...
>
> ...
>
> When an IP packet arrives at a Cellular node, addressed to a mobile host for which no up-to-date routing cache mapping is available then the mapping in the paging cache is used to route the packet. This phase is called "Implicit Paging".
>
> ...
>
> Packets transmitted by mobile hosts are routed to the gateway using regular hop-by-hop routing, the cellular IP nodes monitor these packets and update their routing-cache entries with the host address and the interface on which they arrived. Packets addressed to the mobile host are routed hop-by-hop in the reverse by the routing cache mappings. Mobile hosts that are active but do not have any data to send must send periodic route-update packets in order to ensure that route-caches are not purged. For reliability paging caches may also contain mobile hosts that are also contained by routing caches.

(Col. 5, line 45 - col. 7, line 10; Underlining added). As above, a hop-by-hop method does not relate to "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). Claim 15 recites similar features.

Regarding the Singapore University Proposal, Choyi teaches:

> This scheme suggests using a hierarchical mobility management architecture to restrict handoff processing within the domain and uses multicast as a mechanism to deliver packets to multiple base stations to achieve fast handoffs.

(Col. 7, lines 37-40; Underlining added). Claims 1 and 15 do not recite a multicast protocol and instead relate to "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). Claim 15 recites similar features.

Regarding the Hierarchical Micro Mobility, Choyi teaches:

> Datagrams sent by a correspondent node are intercepted by the MN's HA and forwarded to the MN's VCoA [Virtual CoA]. The MS intercepts these packets and tunnels them to the PCoA. The MS sends a (Home Address, Border Router) bind update messages to each of the CNs. The CNs on receiving these messages updates the MN's entry and sends the forthcoming packets to the MN's current PcoA.

(Col. 8, line 63 - col. 9, line 2). The Virtual CoA (VCoA) system does not relate to "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). Claim 15 recites similar features.

Regarding Multicasting Based Architecture for Internet Host Mobility, Choyi teaches:

> This proposal uses IP multicasting as a mechanism to achieve mobility. Every mobile node is issued a multicast address instead of a unicast address. There is no concept of Home Agent/Foreign Agent The multicast address is used along with Location Servers and Multicast Routers to achieve mobility. It is not a solution to the problem of micro-mobility. It is protocol that challenges Mobile IP.

(Col. 9, lines 7-13; Underlining added). Claims 1 and 15 do not recite a multicast protocol and instead relate to "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). Claim 15 recites similar features.

Finally, regarding the Multicast Micro-Mobility (MMM) Protocol, Choyi teaches:

> The MMM protocol takes advantage of IP multicast to achieve fast handoffs. The base stations as defined by the protocol are not merely passive bridges, but has an active participation in the working of the protocol. Efficient handoffs can be achieved if ***triggers from*** **the link layer** were used to perform network layer handoffs. All routers within the wireless domain are required to support IP multicast routing.

(Col. 11, lines 5-11; Underlining and bolding added). Hence, the MMM is not "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" or "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. (Underlining added). **Rather, Choyi teaches that a change in the MN's link layer is triggering an activity**.

Choyi explains this triggering in detail:

> Visiting a Foreign Domain
>
> When a MN enters the coverage area of a BSR (or any other router in this domain), the link layer protocol at the BS serving the mobile node **triggers** a MNAE message. The BS informs its BSR of the arrival of a MN under its coverage. The base stations periodically send MNAE messages to the BSR with the list MNs under its coverage.
>
> The BSR takes an action based on the presence of link layer information of the MN in its caches. If there is an entry for the MN in its binding cache, then the BSR refreshes the entry. If there is an entry for the MN in its probable cache, then the BSR **joins the multicast group** and transfers the entry from the probable cache to the binding cache. If there are no entries in either of its caches then the BSR sends a mobile IP agent advertisement message to the mobile node.

(Col. 13, lines 8-21; Underlining and bolding added). Further:

> If the MN moves to a cell that is connected to a different BSR than the one serving it, then the new BS informs the new BSR of the presence of the MN by sending a mobile node advertisement message. If the BSR has an entry in its probable cache associating the link layer information given by the BS to

> the one found in the probable cache **then it sends a join message to the MAR (requesting to join the multicast group).** Meanwhile, the old BSR, which does not receive a mobile node advertisement message from at least one of its base stations refreshing the binding cache entry of the MN, then moves the biding entry for the MN to its probable cache presuming that the mobile node has moved to its neighbor.

(Col. 14, lines 9-26; Underlining and bolding added). Thus, Choyi teaches that the BSRs watch for a change in the link layer information of a MN. When the link layer information of a MN changes, the BSR joins the respective BS to a multicast group.

In contrast, Claim 1 recites, "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices." Using a link layer change to trigger an action is not generating a link-layer frame and sending the link-layer frame to a plurality of access devices. Hence, Choyi fails to whatsoever teach at least "generating a link-layer frame, wherein the link-layer frame includes a broadcast address and the unicast destination address" and "sending, via the broadcast address, the link-layer frame to a plurality of access devices" as recited by Claim 1. Moreover, whereas Choi relates to *multicast*, Claim 1 involves a *broadcast* address. Multicast and broadcast are not the same. Claim 15 recites similar features to Claim 1.

Therefore, Choyi fails to teach, suggest, or describe all of the elements of Claims 1 and 15. An anticipation rejection cannot be properly maintained where the references used in the rejection do not disclose all of the recited claim elements. Claims 2-10 include the elements of Claim 1. Therefore, Applicant respectfully requests withdrawal of the rejection of Claims 1-10 and 15.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C. F. R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C. F. R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date May 28, 2009

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